

AMENDMENTS TO SPECIFICATION

Page 1, line 15 to Page 2, line 8:

In order to prevent ~~from~~ passing of a greater electric current through the motor coil during abnormal operation, there is an auto restart function build in a drive IC. When the motor is operated ~~abnormal~~ abnormally, a series of pulsed signals are used to allow a current ~~passing to~~ pass through the motor coil a short-term time, such as a few seconds, and thus a successive passage of a greater electric current is prevented. After passing an electric current for a short term, the electric current on the motor coil is interrupted if an abnormal operation of the motor coil is not removed. And the drive IC produces a series of pulsed signals to restart the motor coil shortly after the interruption of the electric current on the motor coil. The auto restart function may be operated repeatedly as long as the abnormal operation of the motor coil ~~is remained~~ remains. However, the auto restart function may still allow a pulsed electric current through the motor coil to thereby consume its maximum power when the motor is restarted.

Page 4, lines 12-20:

Referring again to FIG. 1, a limiting circuit 10 in accordance with the first embodiment is connected with a power source (Vcc) 1 and a motor drive circuit 2. The limiting circuit 10 includes a first transistor 11, a second transistor 12, a first resistor 13 and a second resistor 14. The limiting circuit 10 has a first terminal (1) connected to the power source 1, and a second terminal (b) connected to the motor drive circuit 2. The first resistor 13 serves as the first terminal (1) while a base of the first transistor 11 ~~serving~~ serves as the second terminal (b). Preferably, the first transistor 11 and the second transistor 12 are NPN type transistors which serve as switches.

Page 5, line 13 to Page 6, line 5:

Referring again to FIG. 1, when the motor drive circuit 2 is operated ~~in normal~~ normally, the power source 1 supplies ~~with~~ a bias through the first resistor 13 to the base of the first transistor 11. ~~As~~ When the bias of the base of the first transistor has risen greater than a

predetermined voltage, the first transistor 11 is saturated. Since the power source 1 supplies an electric current with a normal voltage to pass through the motor drive circuit 2, the first transistor 11 and the second resistor 14 successively, an end point (c) of the second resistor 14 provides ~~with~~ a bias that is inadequate to turn on the second transistor 12. Consequently, the limiting circuit 10 is unable to conduct an electric current from the power source 1 to the ground through the first resistor 13 and the second transistor 12. Alternatively, a completed electric current supplied from the power source 1 flows through the motor drive circuit 2, the first transistor 11 and the second transistor 14 successively.

Page 6, line 6 to Page 7, line 2:

Referring again to FIG. 1, when the motor drive circuit 2 is operated ~~in abnormal~~ abnormally or jammed, an electric current supplied from the power source 1 ~~is risen~~ rises rapidly. Since the power source 1 supplies a greater electric current with a high voltage to pass through the motor drive circuit 2, the first transistor 11 and the second resistor 14 successively, an end point (c) of the second resistor 14 provides ~~with~~ a bias that ~~is~~ has risen rapidly and is now adequate to turn on the second transistor 12. Once the bias of the end point (c) of the second resistor 14 ~~is~~ has risen greater than a predetermined voltage, the second transistor 12 is saturated and then a base of the first transistor 11 has a decrease in voltage. When the bias of the base of the first transistor 11 is lower than a predetermined voltage, the first transistor 11 ~~is returned to turn~~ turns off. Consequently, the limiting circuit 10 ~~is completely connected~~ connects an electric current from the power source 1 to the ground through the first resistor 13 and the second transistor 12. Thereby, a greater electric current supplied from the power source 1 cannot flow through the motor drive circuit 2, the first transistor 11 and the second resistor 14 successively, and the motor drive circuit 2 is cut off.

Page 7, lines 3-10:

Referring again to FIG. 1, as the first transistor 11 is turned off, the bias of the base of the second transistor 12 and the end point (c) of the second resistor 14 may be decreased rapidly. Once the bias of the base of the second transistor 12 is lower than a predetermined voltage, the

second transistor 12 is turned off. In this circumstance, since the second resistor 12 is turned off, the bias of the base of the first transistor 11 ~~is risen~~ risers again. Once the bias of the base of the first transistor 11 is greater than a predetermined voltage, the first transistor is turned on again.

Page 7, line 11 to Page 8, line 1:

Referring again to FIG. 1, when the first transistor 11 is turned on again, the bias of the end point (c) of the second resistor 14 is also able to turn on the second transistor 12 again if the electric current supplied from the power source is still high. Meanwhile, a bias of an end point (d) of the first resistor 13 is synchronously decreased to turn off the first transistor 11. Consequently, the limiting circuit 10 ~~is completely reconnected~~ reconnects an electric current from the power source 1 to the ground through the first resistor 13 and the second transistor 12. Therefore, the limiting circuit 10 actuates the first transistor 11 and the second transistor 12 repeatedly until the electric current and the voltage of the power source 1 are stable and normal. Namely, the operation of the motor drive circuit 2 is returned to a normal state.

Page 9, lines 15-19:

Referring again to FIG. 3, when the motor drive circuit 2 is operated ~~in normal~~ normally, the first transistor 11 is turned off and the second transistor 12 is turned on. Consequently, a completed electric current supplied from the power source 1 flows through the second resistor 14, the second transistor 12 and the motor drive circuit successively.

Page 9, line 20 to Page 10, line 14:

Referring again to FIG. 3, when the motor drive circuit 2 is operated ~~in abnormal~~ abnormally or is jammed, an electric current supplied from the power source 1 ~~is risen~~ risers rapidly. As the greater electric current is passed through the second resistor 14, a bias of an end point (c) of the second resistor 14 is constantly decreased and adequate to turn on the first transistor 11. Once the bias of the end point (c) of the second resistor 14 is decreased lower than a predetermined voltage, the first transistor 11 is saturated and then a base of the second transistor 12 has an increase in voltage. When the bias of the based of the second transistor 12

is greater than a predetermined voltage, the second transistor 12 ~~is returned to turn~~ turns off. Consequently, the limiting circuit 10 ~~is completely connected~~ connects an electric current from the power source 1 to the ground through the first transistor 11 and the first resistor 13. Thereby, a greater electric current supplied from the power source 1 cannot flow through the second resistor 14, the first transistor 11 and the motor drive circuit 2 successively, and the motor drive circuit 2 is cut off.

Page 11, lines 3-13:

Referring again to FIG. 3, when the second transistor 12 is turned on again, the bias of the end point (c) of the second resistor 14 is also able to turn on the first transistor 11 again if the electric current supplied from the power source is still high. Meanwhile, a bias of an end point (d) of the first resistor 13 is synchronously increased to turn off the second transistor 12. Consequently, the limiting circuit 10 ~~is completely reconnected~~ reconnects an electric current from the power source 1 to the ground through the first transistor 11 and the first resistor 13. Therefore, the limiting circuit 10 actuates the first transistor 11 and the second transistor 12 repeatedly until the electric current and the voltage of the power source 1 are stable and normal. Namely, the operation of the motor drive circuit 2 is returned to a normal state.